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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/642,620	08/18/2000	John David Westwood	SJ0000008US1	8250

7590 02/27/2004

Charles Berman
Oppenheimer Wolff & Donnelly LLP
2029 Century Park East
38th Floor
Los Angeles, CA 90067

EXAMINER	
BERNATZ, KEVIN M	

ART UNIT	PAPER NUMBER
1773	

DATE MAILED: 02/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/642,620	WESTWOOD, JOHN DAVID	
	Examiner	Art Unit	
	Kevin M Bernatz	1773	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-23 is/are pending in the application.

4a) Of the above claim(s) 4-23 is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-3 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Response to Amendment

1. Preliminary amendments to claim 1, filed on November 24, 2003, have been entered in the above-identified application.

2. Applicant's petition to revive the case has been granted.

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Examiner's Comments

4. Applicant is reminded that the limitation "nanolamination" has been given the broadest reasonable interpretation in view of the as-filed specification, namely that a "nanolamination" must be a layer with a thickness of about 3 Å or less (*specification page 3, lines 8 – 9*).

5. The Examiner notes that "Kenji et al. (JP '219 A) is actually Katori et al. (see provided English Translation of JP '219 A).

Request for Continued Examination

6. The Request for Continued Examination (RCE) under 37 CFR 1.53 (d) filed on November 24, 2003 is acceptable and a RCE has been established. An action on the RCE follows.

Claim Rejections - 35 USC § 103

7. Claims 1 – 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over York (U.S. Patent No. 3,520,664) in view of Katori et al. (JP 63-299219 A) and Barnard et al. (U.S. Patent No. 5,919,580). See provided English Translation of Katori et al. (JP '219 A).

Regarding claims 1 - 3, York discloses a magnetic film comprising a magnetic alloy (*Figure 1, layer 20*) and at least a single lamination of a material selected from applicants' claimed Markush group (*layer 18; col. 5, lines 3 – 14; and Examples*), wherein said lamination is a discontinuous layer (*col. 3, lines 12 – 15 and 52 – 54 and col. 5, lines 3 – 14*).

Regarding the limitations "nanolamination" (claim 1) and "a thickness of approximately 0.4 to 1.7 Å" (claim 3), York teaches the importance of using a thin enough nucleating layer so that it is discontinuous and the Examiner notes that York specifically states that "the thickness of the nucleating film 18 is necessarily dictated by the choice of materials used" (*col. 5, lines 10 - 12*). The Examiner deems that it would have been obvious to one having ordinary skill in the art to have determined the optimum value of a results effective variable such as the lamination thickness through routine experimentation, especially given the teaching in York regarding the desire to form a discontinuous layer. *In re Boesch*, 205 USPQ 215 (CCPA 1980); *In re Geisler*, 116 F. 3d 1465, 43 USPQ2d 1362, 1365 (Fed. Cir. 1997); *In re Aller*, 220 F.2d, 454, 456, 105 USPQ 233, 235 (CCPA 1955).

York fails to disclose a T-M-X alloy meeting applicant's claimed composition limitations (claims 1 and 2).

However, Katori et al. and Barnard et al. teach that T-M-X alloys meeting applicant's claimed composition limitations are known ferromagnetic alloys which possess good soft magnetic properties, including low coercive force and high saturation magnetization (*Barnard et al.: col. 3, lines 23 – 30; col. 5, lines 24 – 48; and Figures; Katori et al. Claims; Abstract; page 3, lines 4 – 9 and 25 – 30; page 7, lines 21 – 28; and Examples*).

It would therefore have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify the device of York to utilize a T-M-X alloy meeting applicant's claimed composition limitations (claims 1 and 2) as taught by Katori et al. and Barnard et al., since such an alloy is known to possess good soft magnetic properties, including low coercive force and high saturation magnetization.

8. Claims 1 – 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakamoto et a. (U.S. Patent No. 6,456,466 B1) in view of Katori et al. (JP '219 A) and Barnard et al. ('580). See provided English Translation of Katori et al. (JP '219 A).

Regarding claims 1 - 3, Nakamoto et al. disclose a magnetic film comprising a magnetic alloy (*col. 3, lines 52 - 55*) and at least a single lamination of a material selected from applicants' claimed Markush group (*col. 3, lines 52 – 55; col. 6, lines 22 – 25 and Examples*), wherein said lamination is a discontinuous layer (*Figure 2A and col. 4, lines 43 - 47*).

Regarding the limitations "nanolamination" (claim 1) and "a thickness of approximately 0.4 to 1.7 Å" (claim 3), Nakamoto et al. teach the importance of optimizing the thickness of the insulating layer such that the overall alloy possesses good resistivity and permeability (*col. 4, lines 56 – 64*). The Examiner deems that it would have been obvious to one having ordinary skill in the art to have determined the optimum value of a results effective variable such as the lamination thickness through routine experimentation, especially given the teaching in Nakamoto et al. regarding the desire to form a discontinuous layer possessing a good combination of resistivity and permeability.

Nakamoto et al. fail to disclose a T-M-X alloy meeting applicant's claimed composition limitations (claims 1 and 2).

However, Katori et al. and Barnard et al. teach that T-M-X alloys meeting applicant's claimed composition limitations are known ferromagnetic alloys which possess good soft magnetic properties, including low coercive force and high saturation magnetization (*Barnard et al.: col. 3, lines 23 – 30; col. 5, lines 24 – 48; and Figures; Katori et al. Claims; Abstract; page 3, lines 4 – 9 and 25 – 30; page 7, lines 21 – 28; and Examples*).

It would therefore have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify the device of Nakamoto et al. to utilize a T-M-X alloy meeting applicant's claimed composition limitations (claims 1 and 2) as taught by Katori et al. and Barnard et al., since such an alloy is known to possess good soft magnetic properties, including low coercive force and high saturation magnetization.

Response to Arguments

9. The rejection of claims 1 - 3 under 35 U.S.C § 103(a) – Sasaki et al. in view of Kenji et al. ('219 A) (sic)

The rejection of claims 1 - 3 under 35 U.S.C § 103(a) – Shimada et al. in view of Kenji et al. ('219 A) (sic)

Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Tsai (U.S. Patent No. 5,580,664) teach a discontinuous (*Figure 2 and col. 6, lines 38 - 40*) laminate of a soft magnetic alloy/oxide material (*examples and col. 6, lines 17 – 25*), but fail to teach or suggest layers of approximately 3 Å in thickness.. Hirano et al. (U.S. Patent No. 5,864,452) teach discontinuous (*Figure 14, element 52 and col. 11, lines 41 - 62*) oxide material (*col. 13, lines 24 – 26 and col. 14, lines 48 – 53*), but fails to provide any teaching regarding the magnetic material.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin M Bernatz whose telephone number is (571) 272-1505. The examiner can normally be reached on M-F, 9:00 AM - 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Thibodeau can be reached on (571) 272-1516. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kevin M. Bernatz
Patent Examiner

February 20, 2004